

## APPENDIX D

### STANDARD OF COMPETENCE FOR SEAFARERS DESIGNATED TO TAKE CHARGE OF MEDICAL CARE ON BOARD SHIP

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Standards	D-1
Specification of Minimum Standard of Proficiency in Medical Care on Board Ship	D-2
Coast Guard Assessment Guideline of Table A-VI/4-2	D-4



# **STANDARD OF COMPETENCE FOR SEAFARERS DESIGNATED TO TAKE CHARGE OF MEDICAL CARE ON BOARD SHIP**

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## **STANDARD - SECTION A-VI/4-2 OF STCW CODE**

Every seafarer who is designated to take charge of medical care on board ship shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/4-2.

The level of knowledge of the subjects listed in column 2 of table A-VI/4-2 shall be sufficient to enable the designated seafarer to take immediate effective action in the case of accidents or illness likely to occur on board ship.

Every candidate for certification under the provisions of regulation VI/4, paragraph 2 shall be required to provide evidence that the required standard of competence has been achieved in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-VI/4-2.

**TABLE A-VI/4-2**

**STANDARD OF COMPETENCE FOR SEAFARERS DESIGNATED TO  
TAKE CHARGE OF**

**MEDICAL CARE ON BOARD SHIP**

**Specification Of Minimum Standard Of Proficiency In Medical Care On Board Ship**

<b>COMPETENCE</b>	<b>KNOWLEDGE, UNDERSTANDING AND PROFICIENCY</b>	<b>METHODS FOR DEMONSTRATING COMPETENCE</b>	<b>CRITERIA FOR EVALUATING COMPETENCE</b>
Provide medical care to the sick and injured while they remain on board	<p><b>Care of casualty involving:</b></p> <p>Head and spinal injuries</p> <p>Injuries of ear, nose, throat and eyes</p> <p>External and internal bleeding</p> <p>Burns, scalds and frostbite</p> <p>Fractures, dislocations and muscular injuries</p> <p>Wounds, wound healing and infection</p> <p>Pain relief</p> <p>Techniques of sewing and clamping</p> <p>Management of acute abdominal conditions</p> <p>Minor surgical treatment</p> <p>Dressing and bandaging</p> <p><b>Aspects of nursing:</b></p> <p>General principles</p> <p>Nursing care</p>	<p>Assessment of evidence obtained from practical instruction and demonstration</p> <p>Where practicable, approved practical experience at a hospital or similar establishment</p>	<p>Identification of symptoms is based on the concepts of clinical examination and medical history</p> <p>Protection against infection and spread of diseases is complete and effective</p> <p>Personal attitude is calm, confident and reassuring</p> <p>Treatment of injury or condition is appropriate and conforms to accepted medical practice and relevant national and international medical guides</p> <p>The dosage and application of drugs and medication complies with manufacturers' recommendations and accepted medical practice</p> <p>The significance of changes in patients' condition is promptly recognized</p>

Provide medical care to the sick and injured while they remain on board (continued)	<p><b>Diseases, including:</b></p> <p>Medical conditions and emergencies</p> <p>Sexually transmitted diseases</p> <p>Tropical and infectious diseases</p> <p>Alcohol and drug abuse</p> <p>Dental care</p> <p>Gynaecology, pregnancy and childbirth</p> <p>Medical care of rescued persons</p> <p>Death at sea</p> <p>Hygiene</p> <p><b>Disease prevention including:</b></p> <p>Disinfection, disinfestation, de-ratting</p> <p>Vaccinations</p> <p><b>Keeping records and copies of applicable regulations:</b></p> <p>Keeping medical records</p> <p>International and national maritime medical regulations</p>		
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	CRITERIA FOR EVALUATING COMPETENCE
Participate in coordinated schemes for medical assistance to ships	<p><b>External assistance, including:</b></p> <p>Radio-medical advice</p> <p>Transportation of the ill and injured, including helicopter evacuation</p> <p>Medical care of sick seafarers involving co-operation with port health authorities or outpatient wards in port</p>		<p>Clinical examination procedures are complete and comply with instructions received</p> <p>The method and preparation for evacuation is in accordance with recognized procedures and is designed to maximize the welfare of the patient</p> <p>Procedures for seeking radio-medical advice conform to established practice and recommendations</p>

# COAST GUARD ASSESSMENT GUIDELINES

## TABLE A-VI/4-2

### SPECIFICATION OF MINIMUM STANDARD OF COMPETENCE FOR PERSONS IN CHARGE OF MEDICAL CARE

Each candidate for an STCW endorsement as a Person in Charge of Medical Care must meet the standards of competence set out in STCW Code Table A-VI/4-2 (46 CFR 10.203(j)). To accomplish this, he or she must:

- Complete approved education and training and meet all the competencies listed in the table;
- Pass a written examination for the portion of the competencies on knowledge and understanding; and
- Successfully accomplish a practical demonstration of skill for selected competencies.

The United States Coast Guard requires each mariner seeking proficiency as Person in Charge of Medical Care aboard ship to attend a course approved by the National Maritime Center. For this reason, these guidelines contain the assessment criteria for both requirements, knowledge (listed in the paragraph below) and skill, Table A-VI/4-2.

#### **Written Assessments**

The knowledge-based or understanding-based portion of the following competencies may be assessed through a written multiple-choice examination. Written examination in these areas of assessment will satisfy applicable parts of 46 CFR 10.901 if these national guidelines are used in lieu of an alternative set discussed in paragraph 5.c: Signs and symptoms of bleeding; signs and symptoms of burns, scalds and frostbite; types of wounds and their treatment; signs of infection; procedures to manage systemic pain; procedures to manage pain before cleaning; uses of lidocaine with and without epinephrine; suturing a wound and removing sutures; identifying wounds that may be sutured and criteria for removing sutures; signs, symptoms, and emergency treatment for acute abdominal conditions; steps involved in minor surgical procedures; steps for treating an abdominal evisceration; bandaging a sucking chest wound; identifying general principles of nursing care; inserting or simulating inserting a urinary drainage catheter (male and female); inserting a naso-gastric tube; injecting medicine by intramuscular and subcutaneous route; signs, symptoms and treatments for

hyperglycemia, anaphylaxis, dehydration, gonorrhea, syphilis, genital herpes, systemic infections, malaria, and hepatitis A and B; signs of alcoholism and drug abuse; signs of and treatment for toothache and other dental problems; signs, symptoms, and treatments for gynecological conditions, pregnancy and childbirth; methods to determine cause of death and how to prepare a body for storage at sea; personal hygiene; preventing disease aboard ship; preventing disease through vaccination; preparing a patient for evacuation; and methods of cooperation with health authorities in port.

### **Demonstrations Of Skill**

In addition to passing a written examination, the competency entitled “Provide medical care to the sick and injured while they remain on board” requires a practical demonstration of skill to assess proficiency. These assessment guidelines establish the conditions under which the assessment will occur, the performance or behavior the candidate is to accomplish, and the standards against which to measure the performance. The examiner can use a checklist in conducting assessments of practical demonstrations of skill. Checklists allow a training institution or designated examiner to avoid overlooking critical tasks when evaluating a candidate’s practical demonstration. Training institutions and designated examiners can develop their own checklists for use in conducting the assessments in a complete and structured manner.

**Coast Guard Assessment Guidelines for TABLE A-VI/4-2 of STCW Code**  
**Specification Of Minimum Standard Of Competence For Persons In Charge Of Medical Care**

*\* Indicates a proficiency from Table A-VI/4-2*

STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
Provide medical care to the sick and injured while they remain on board	<b>Care of the casualty involving head and spinal injuries*</b>	In a graded practical exercise, given a patient simulating a head injury,	the candidate will demonstrate the techniques for conducting a neurological assessment.	The candidate correctly demonstrates the following assessment techniques and states the significance of each finding: 1. pupillary reaction; 2. level of consciousness; 3. verbal communication; and 4. sensory motor status.
	<b>Care of the casualty involving injuries to ear, nose, throat and eye*</b>	In a graded practical exercise, given a patient simulating a bleed from the ear,	the candidate will use external bandages to control bleeding from the ear.	The candidate correctly: 1. demonstrates the proper procedures for self-protection against the transmission of blood-borne pathogens; 2. applies an external bandage to stem bleeding of the ear; and 3. does not pack the ear.
		In a graded practical exercise, given a patient simulating a nose bleed,	the candidate will demonstrate the proper techniques to stop bleeding from the nose.	The candidate: 1. demonstrates the proper procedures for self-protection against the transmission of blood-borne pathogens;



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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
				<ol style="list-style-type: none"> <li>2. positions the patient sitting upright with the head tilted forward;</li> <li>3. pinches the bridge of the nose; and</li> <li>4. places ice on the back of the neck or the forehead.</li> </ol>
		In a graded practical exercise, given a patient simulating an object impaled in the eye,	the candidate will demonstrate the proper method of bandaging an eye impaled by a foreign object.	The candidate: <ol style="list-style-type: none"> <li>1. immobilizes the object impaled in eye; and</li> <li>2. bandages both the affected and unaffected eyes.</li> </ol>
		In a graded practical exercise, given a patient simulating a foreign liquid or solid substance in the eye,	the candidate will demonstrate the proper method of treating a foreign liquid or solid substance in the eye.	The candidate flushes the affected eye with copious amount of water (saline, if immediately available) to wash away chemicals or solid particles.
		In a graded practical exercise, given a patient simulating a soft-tissue injury to the throat,	the candidate will demonstrate the proper method of treating a soft-tissue injury to the throat.	The candidate: <ol style="list-style-type: none"> <li>1. anticipates a compromised airway; and</li> <li>2. maintains airway management techniques.</li> </ol>

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
	<b>Care of the casualty involving external and internal bleeding*</b>	In a graded practical exercise, given a patient simulating a bleeding wound,	the candidate will demonstrate application of pressure dressing and location of pressure points.	The candidate correctly demonstrates the: <ol style="list-style-type: none"> <li>proper procedures for self-protection against the transmission of blood-borne pathogens;</li> <li>location of the brachial and femoral pressure points; and</li> <li>application of a pressure dressing at the wound site.</li> </ol>
		In a graded practical exercise, given a patient simulating an arterial bleed of an extremity,	the candidate will state when to use a tourniquet.	The candidate correctly states that a tourniquet will only be applied when: <ol style="list-style-type: none"> <li>all other methods of controlling bleeding have failed; and</li> <li>continued bleeding is life-threatening.</li> </ol> <p>NOTE: The candidate shall demonstrate the proper procedures for self-protection against the transmission of blood-borne pathogens.</p>

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	<b>IV Therapy*</b>	In a graded practical exercise, given a simulated patient or simulated arm designed for training in intravenous (IV) infusion and the necessary materials to initiate an IV infusion,	the candidate will demonstrate the proper technique for initiating maintaining, and calculating the rate of flow for the IV infusion set being used such as macro/micro drip unit an IV infusion	<p>The candidate correctly:</p> <ol style="list-style-type: none"> <li>1. demonstrates the technique for calculating rate of flow;</li> <li>2. selects infusion equipment while maintaining sterility;</li> <li>3. demonstrates the use of body substance isolation precautions throughout the procedure;</li> <li>4. assembles infusion equipment while maintaining sterility, including:               <ol style="list-style-type: none"> <li>a. infusion fluid (inspects for type of fluid, expiration date, and presence of precipitates in solution;</li> <li>b. infusion tubing for damage;</li> <li>c. IV catheter;</li> <li>d. constriction band;</li> <li>e. tape; and</li> <li>f. insertion site dressing;</li> </ol> </li> <li>5. spikes infusion tubing into IV fluid container and primes tubing to remove air;</li> <li>6. selects vein in upper extremity suitable for intravenous catheter insertion;</li> <li>7. cleanses the insertion site with alcohol or povidone (ask about allergy to povidone);</li> </ol>

## Coast Guard Assessment Guidelines for TABLE A-VI/4-2 of STCW Code

### Specification Of Minimum Standard Of Competence For Persons In Charge Of Medical Care

				<ul style="list-style-type: none"><li>8. applies constriction band;</li><li>9. locates vein and inserts an over-the-needle type catheter into the vein;</li><li>10. advances the catheter into the vein when blood enters the flash chamber;</li><li>11. removes the constriction band when the catheter is fully advanced;</li><li>12. attaches infusion tubing and secures infusion device to the patient using tape;</li><li>13. applies a sterile dressing to the insertion site and tapes the infusion tubing into a tension loop; and</li><li>14. demonstrates the method to open infusion of fluid by releasing the tubing roller clamp.</li></ul>
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## Coast Guard Assessment Guidelines for TABLE A-VI/4-2 of STCW Code

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
	<b>Care of the casualty involving fractures, dislocations and muscular injuries*</b>	In a graded practical exercise, given a patient simulating a fracture of the ankle and a dislocated shoulder, and materials for splinting,	the candidate will demonstrate the splinting of an ankle fracture and immobilization of a dislocated shoulder,	<p>The candidate correctly applies a pillow splint to an ankle fracture, following these procedures:</p> <ol style="list-style-type: none"> <li>1. manually stabilizes the fractured ankle or leg;</li> <li>2. assesses distal neuro-vascular function;</li> <li>3. applies pillow to the ankle and lower leg, wrapping it around the ankle and leg and keeping the foot exposed;</li> <li>4. secures pillow using cravats or other device to tie ends together; and</li> <li>5. re-assesses distal neuro-vascular function</li> </ol> <p>The candidate correctly immobilizes a dislocated shoulder using the following procedures:</p> <ol style="list-style-type: none"> <li>1. assesses distal neuro-vascular function;</li> <li>2. applies sling using triangular bandage or commercial-type sling (knot of sling should not be pressing on neck);</li> </ol>

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
				<ol style="list-style-type: none"> <li>3. using a cravat or other binding, applies a swath over sling and around body; and</li> <li>4. re-assesses distal neuro-vascular functions</li> </ol>
	<b>Care of the casualty involving techniques of sewing and clamping*</b>	In a graded practical exercise, given a simulated wound, suturing needle and thread, clamps, and suture-removal scissors	the candidate will utilize all of the equipment to demonstrate the proper technique to suture the wound, including the application of steri-strips.	<p>The candidate correctly demonstrates a standard instrument tie to include the following:</p> <ol style="list-style-type: none"> <li>1. ties all knots to one side of the wound;</li> <li>2. begins sutures at center of wound and proceeds outward; and</li> <li>3. uses strategic sutures to match up obvious points in irregular wounds.</li> </ol> <p>The candidate correctly demonstrates application of steri-strips to a laceration which does not require sutures.</p> <p>The candidate correctly demonstrates suture removal to include the following:</p> <ol style="list-style-type: none"> <li>1. lifts suture with forceps;</li> <li>2. cuts suture near skin surface; and</li> <li>3. pulls suture out holding the knotted end of the suture.</li> </ol>

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
				NOTE: The candidate shall demonstrate the proper procedures for self-protection against the transmission of blood-borne pathogens.
		In a graded practical evaluation, given a simulated chest wound, occlusive dressing materials, and tape,	the candidate will bandage a sucking chest wound.	The candidate correctly demonstrates the following: 1. the proper procedures for self-protection against the transmission of blood-borne pathogens; 2. surveys and determines the entrance (and exit) wound(s); 3. covers wound(s) with occlusive dressing; 4. tapes three sides of the dressing over the wound; and 5. monitors respiratory effort of victim
	<b>Nursing Care*</b>	In a graded practical evaluation, given a real patient or urinary-catheterization simulator, and supplies for urinary-catheter insertion,	the candidate will insert or simulate inserting a urinary- drainage catheter (male and female).	The candidate correctly demonstrates the following: 1. maintenance of correct sterile techniques; 2. cleansing of the meatus ; 3. lubrication of the catheter;

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				<ol style="list-style-type: none"> <li>4. insertion of the catheter into urethra until urine drains; and</li> <li>5. opening of the roller clamp of the tubing.</li> </ol>
		In a graded practical evaluation, given a mannequin and supplies for naso-gastric tube insertion,	the candidate will insert a naso-gastric tube.	<p>The candidate correctly demonstrates the following:</p> <ol style="list-style-type: none"> <li>1. utilizes proper precautions for isolating bodily substances;</li> <li>2. measures length of tube to insert;</li> <li>3. lubricates tube;</li> <li>4. positions patient;</li> <li>5. inserts tube through nose;</li> <li>6. demonstrates one test to confirm placement; and</li> <li>7. secures tube to nose with tape.</li> </ol>



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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
		In a graded practical evaluation, given a real or simulated patient, and supplies for injections of medicine,	the candidate will administer medication injection by intramuscular route.	<p>The candidate:</p> <ol style="list-style-type: none"> <li>1. confirms the medicine order, calculates proper dosage, identifies correct medicine and confirmed expiration date;</li> <li>2. draws up correct dosage from medicine vial using sterile technique, checking medicine to medicine order at least three times and using correct needle and syringe for injection based on location of injection and amount of medicine;</li> <li>3. demonstrates the proper procedures for self-protection against the transmission of blood-borne pathogens;</li> <li>4. Locates the injection site (deltoid, glutens, or vastus lateralis);</li> <li>5. Cleanses the injection site with alcohol pad using circular motion;</li> <li>6. Inserts the needle into muscle at 90° angle;</li> <li>7. Aspirates the syringe, and, if no blood, injects the medication; and</li> <li>8. Displays the proper handling and disposal of the needle.</li> </ol>

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STCW Competence	Knowledge, Understanding, and Proficiency	Performance Condition	Performance Behavior	Performance Standards
		In a graded practical evaluation, given a real or simulated patient, and supplies for injections of medicine,	the candidate will inject medicine by subcutaneous route and intra-muscular (IM) route..	<p>The candidate:</p> <ol style="list-style-type: none"> <li>1. confirms the medicine order, calculates proper dosage, identifies correct medicine and confirms expiration date;</li> <li>2. draws up the correct dosage from medicine vial using sterile technique, checking medicine to medicine order at least three times and using correct needle and syringe for injection based on location of injection and amount of medicine;</li> <li>3. demonstrates the proper procedures for self-protection against the transmission of blood-borne pathogens;</li> <li>4. locates the injection site;</li> <li>5. cleanses the injection site with alcohol pad using circular motion;</li> <li>6. inserts the needle:               <ol style="list-style-type: none"> <li>a. into subcutaneous tissue at 45° angle;or</li> <li>b. into intra-muscular tissue at 90° angle;</li> </ol> </li> <li>7. aspirates the syringe, and, if no blood, injects the medicine; and</li> <li>8. displays the proper handling and disposal of the needle</li> </ol>